

(۱۴)

$$\{(1,2)(1,3)(2,2)(2,3)(3,2)(3,3)\} - \{(2,2)(2,3)(3,2)(3,3)\} = \{(1,2)(1,3)\}$$

جواب

(۲)

الف)

$$\begin{aligned} m+2 &= m^2 \\ m^2 - m - 2 &= 0 \\ m &= -1 \checkmark \\ m &= 2 \checkmark \end{aligned}$$

ب)

$$\begin{aligned} m^2 &= m+2 \\ m^2 - m - 2 &= 0 \\ m &= -1 \checkmark \\ m &= 2 \checkmark \end{aligned}$$

نتیجه مقادیر m

(۲)

$$\begin{cases} x=1 \Rightarrow x^2 - 1 = d - 1 = 0 \\ x=1 \Rightarrow a + b = 0 \Leftrightarrow \end{cases}$$

$$x=2 \Rightarrow \begin{cases} 2a + b = 1 \\ a + b = 0 \end{cases} \Rightarrow \begin{aligned} a &= 1 \\ b &= -1 \end{aligned} \Rightarrow axb = -4r$$

(۲)

$$pk - r = r - rk$$

$$dk = v$$

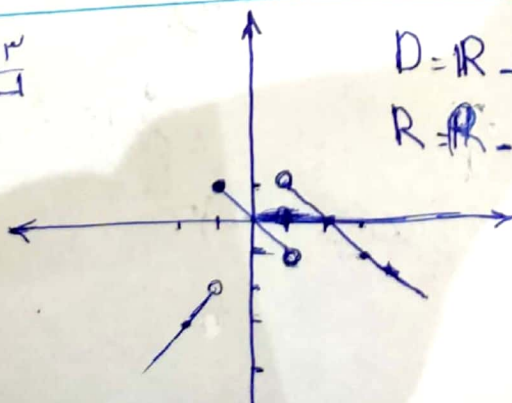
$$k = \frac{v}{\omega} = 1, r$$

(۲)

$$-x+2 \rightarrow \begin{array}{c|c|c|c} x & 1 & 2 & 1 \\ \hline y & 1 & 0 & -1 \end{array}$$

$$-x \rightarrow \begin{array}{c|c|c|c} x & -1 & 0 & 1 \\ \hline y & 1 & 0 & -1 \end{array}$$

$$x=1 \rightarrow \begin{array}{c|c|c|c} x & 1 & -2 & -1 \\ \hline y & 1 & -2 & -1 \end{array}$$



$$D = \mathbb{R} - \{1\}$$

$$R = \mathbb{R} - (1, +\infty)$$

(۲)

ا) $y^3 + x^2 + 1 = 0 \Rightarrow y^3 = -\frac{x^2+1}{1} \xrightarrow{\text{تأخذ الجذر}} y_1 = y_2 = y_3$ ✓ تابع است

ب) ✓ تابع است

(۲)

(۵)

ا) $\frac{x-1}{x-2} \geq 0$

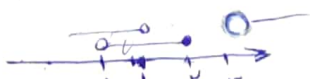
$\frac{1}{+} \frac{1}{-} \frac{1}{+} \frac{1}{+}$

$\frac{2-x}{x} \geq 0$

$\frac{0}{-} \frac{1}{+} \frac{1}{-}$

$\Rightarrow$ جواب: $(0,1)$

(۱)



$\Rightarrow \sqrt{x+4y-1} = \sqrt{x}$
 $(\sqrt{y-1})^2 = (\sqrt{x+4y-1})^2$

$y-1 = x - 2\sqrt{x} + x$

$y = -2\sqrt{x} + x + x$

جواب: $\mathbb{R}$ $[0,3]$

~~$x^2 - 10x + 14 = 0$~~
 $x^2 - 10x + 14 \geq 0$
 $x = 1, x = 9$
 $D = [1, 9] \cup [9, 1]$

(۱۵)

الف) $\Rightarrow D = [9, 1]$
 ~~$x^2 - 10x + 14 = 0$~~
 $x^2 - 10x + 14 \geq 0$
 $x = 1, x = 9$
 $D = [1, 9] \cup [9, 1]$

$x^2 - 10x + 14 \geq 0 \Rightarrow \frac{1}{+} \frac{1}{-} \frac{1}{+}$
 $x = 1, x = 9$
 $-20 + 14 = -6 \Rightarrow x = \frac{14}{2} = 7$

الف) $x^2 - 10x + 14 \geq 0$
 $x^2 - 10x + 14 \geq 0 \Rightarrow x = 1, x = 9$
 $D = [1, 9] \cup [9, 1]$

$x^2 - 10x + 14 \geq 0 \Rightarrow x = 1, x = 9$

$x^2 - 10x + 14 \geq 0 \Rightarrow x = 1, x = 9$
 $D = (-\infty, 1) \cup (\frac{14}{9}, +\infty)$

(۱۵)

